

KHALILOV, Z. I.

Call Nr: AF 1108825
 Transactions of the Third All-union Mathematical Congress (Cont.)
 Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.
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KHALILOV, Z. I.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721720005-7" Call Nr: AF 1108825
 Transactions of the Third All-union Mathematical Congress (Cont.)
 Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.
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SOV124-57-5-5807

Solution of the Seepage Problems of Gas-bubble-containing Oil by Means of (cont.)

the boundary problem considered. It is pointed out that under specific conditions the resulting finite-difference system is stable. It is also noted that the problems of nonstationary seepage of gas can be solved by means of the proposed system.

G. I. Barenblatt

Card 2/2

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APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721720005-7"

SOV/124-58-7-7282

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 7, p 1 (USSR)

AUTHOR: Khalilov, Z.I.

TITLE: On the Present State and Prospects of Future Development of Problems in the Physical and Mathematical Sciences Now Being Coordinated in the Azerbaijan Soviet Socialist Republic (O sostoyaniii i perspektivakh razrabotki koordiniruyemykh v respublike problem v oblasti fiziko-matematicheskikh nauk)

PERIODICAL: Tr. 1-y nauchn. sessii Soveta po koordinatsii AN AzerbSSR. Baku, AN AzerbSSR, 1957, pp 23-30

ABSTRACT: An account is given of the basic trends and research themes of the Republic's scientific institutions in the fields of physical and mathematical sciences; the principal results of the work done in these fields over the period 1953-1955 are enumerated. Problems requiring further elaboration are mentioned, and note is taken of certain deficiencies in the performance of the Republic's scientific institutions. Of the problems currently receiving attention in the field of mechanics the following are listed: the motion of pseudo-plastic viscous fluids, the torsion and flexure of girders, the filtering of gases and aerated liquids, and the dynamics and statics of oil-well drill pipes. Reviewer's name not given

1. Physics--USSR 2. Mathematics--USSR 3. Scientific research--USSR

Card 1/1

KHALILOV, Z.I.

Development of physicomathematical sciences in Soviet Azerbaijan.
Izv. AN Azerb. SSR no.10:25-38 0 '57. (MIRA 10:11)
(Azerbaijan--Physics--Research)
(Azerbaijan--Mathematics--Research)

KHALILOV, Z.I.

One application of the theory of operator equation with partial derivatives. Dokl. AN Azerb.SSR 13 no.5:465-468 '57. (MLRA 10:7)
(Differential equations, Partial)

MAMEDBEYLI, G.D.; KHALILOV, Z.I., akademik, red.; VARUNTSYAN, I., red.
izd-va; AGAYEVA, Sh., tekhn.red.

[Nasir al-Oin al-Tusi on the theory of parallel lines and the
theory of ratios] Mukhammed Nasireddin Tusi o teorii parallel'-
nykh linii i teorii otnoshenii. Baku, Izd-vo Akad.nauk Azer-
baidzhanskoi SSR, 1959. 98 p.

(Al-Tusi, Nasir al-Oin Muhammad ibn Muhammad, 1201-1274)
(Geometry)

(MIR 12:12)

16-3900

16-3500

AUTHOR: Khalilov, Z.I.

89047
S/044/60/000/009/018/021
C111/C222TITLE: The Solution of a Problem for an Equation of Mixed Type With the
Method of NetsPERIODICAL: Referativnyy zhurnal Matematika, 1960, No.9, p.186,
Abstract No.10936. Tr.In-ta fiz.i matem. AN Azerb.SSR,
1953, Vol.6, pp.5-13TEXT: The method of nets is applied for the solution of a boundary value
problem for the equation of mixed type

(1) $(\partial^2 u / \partial x^2) + \theta(y)(\partial^2 u / \partial y^2) = 0,$

where $\theta(y) = 1$ for $y > 0$, $\theta(y) = -1$ for $y < 0$; the equation is considered
in a region D bounded by a curve L with the ends in A(0,0) and B(1,0) in
the upper halfplane and bounded by the parts L_1 and L_2 of the characteristics
in the lower halfplane. In the upper halfplane, the net consists of
parallels to the axes of coordinates, and in the lower halfplane it
consists of parallels to the characteristics. For knots, where $y > 0$,
the simplest 5-point difference equation for the Laplace equation is taken;
for knots with $y < 0$, a difference equation is established which corresponds

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89047

S/044/60/000/009/018/021
C111/0222

The Solution of a Problem for an Equation of Mixed Type With the Method
of Nets

to the wave equation; for knots with $y=0$, for the establishment of the difference equation it is considered that du/dy shall remain continuous for a transition on the x-axis. The author proves the uniqueness of the solution of the difference equation and the convergence (for a sufficiently small step) of the difference solution to the solution of the differential equation. The method of successive approximation is used for the solution of the system of difference equations. The convergence of the method of successive approximations is proved. The author remarks that he has used the corresponding parts of the book of I.G.Petrovskiy "Lectures on Partial Differential Equations" (1950) for the proof of the given assertions. [Abstracter's note: The above text is a full translation of the original Soviet abstract.] X

Card 2/2

26175

S/044/61/000/006/014/019
C111/C22216.3.00

AUTHOR:

Khalilov, Z.I.

TITLE:

The approximation of the solutions of boundary value problems
for general elliptic systems

PERIODICAL:

Referativnyy zhurnal. Matematika, no.6, 1961, 23,
abstract 6V 183. (Tr. In-ta fiz.i matem. AN Azerb.SSR,
1953, 6, 88-96)

TEXT:

The author investigates a method of the best approximation
of the solution of the boundary value problem $L(U) = 0$ in the connected
region D , $R_k(U) = f_k(S)$ ($k=1, 2, \dots, m$) on the boundary S where the
differential operators L and R_k are assumed to be linear. The idea of
the considered method consists in the following: The solution of the
equation of the boundary value problem obtained according to a certain
scheme is strongly satisfied, the boundary conditions are approximately
satisfied; i.e. the problem consists in the approximation of a function
or a system of functions by functions of a certain class. If $U=A(\varphi_1, \dots, \varphi_m)$
(A -- linear operator) is the general representation of the sufficiently
regular solutions of the equation $L(U) = 0$, where φ_k belong to a certain
class of functions K defined in D then the solution of the boundary

X

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26175

The approximation of the solutions...

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value problem consists in the determination of functions $\varphi_k \in K$ so that for them the boundary conditions $R_k A(\varphi_1, \dots, \varphi_m) = f_k(s)$ ($k=1, 2, \dots, m$) are satisfied with a given exactness. Here it is assumed that the following conditions are satisfied: 1) the mapping $U = A(\varphi_1, \dots, \varphi_m)$ is unique, especially it holds $\varphi_1 = \varphi_2 = \dots = \varphi_m = 0$ for $U = 0$ and reversely 2) the boundary value problem has a unique solution; 3) the class K is characterized by the property that every set $\{\varphi_k\}$ ($k=1, 2, \dots, m$) has a countable base $\{\omega_1^{(k)}\}$, where $\omega_1^{(k)}$ are certain functions defined in D . The functions φ_k ($k=1, 2, \dots, m$) are chosen in the form

$$\sum_{l=1}^{n_k} \lambda_{1+n_1+\dots+n_{k-1}} \omega_1^{(k)},$$

where n_k are certain natural numbers. Then $R_k A(\varphi_1, \dots, \varphi_m) \equiv R_k A(\sum_{l=1}^{n_1} \lambda_l \omega_1^{(1)}, \dots, \sum_{l=1}^{n_m} \lambda_{1+n_1+\dots+n_{m-1}} \omega_1^{(m)}) \equiv \sum_{v=1}^n \lambda_v g_v^{(k)}$ ($k=1, 2, \dots, m$; $n=n_1+\dots+n_m$),
Card 2/3

KHALILOV, Z.I.

PHASE I BOOK EXPLOITATION

SOV/5962

Vsesoyuznoye soveshchaniye po vychislitel'noy matematike i prime-neniyu sredstv vychislitel'noy tekhniki, Baku, 1958.

Trudy (Transactions of the All-Union Conference on Computer Mathematics and Applications of Computers) Baku, Izd-vo AN Azerbaydzhanskoy SSR, 1961. 254 p. 500 copies printed.

Sponsoring Agency: Akademiya nauk Azerbaydzhanskoy SSR. Vychislitel'nyy tsentr.

Eds.: A.A. Dorodnitsyn, S.A. Alekseev, and K.F. Shirinov; Ed. of Publishing House: A. Til'man; Tech. Ed.: T. Ismailov.

PURPOSE: The book is intended for mathematicians and other specialists interested in computer theory and uses for computers.

COVERAGE: The book contains the texts of 24 papers presented at the All-Union Conference on Computer Mathematics and Applications of Computers held in Baku, 3-8 Feb 1958. The "Resolution"

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Transactions of the All-Union (Cont.) SOV/5962

of the conference, consisting of proposals for accelerating the development of computer mathematics and computer engineering, is also included.

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KHALILOV, Z.I., akademik, red.; BAGDATLISHVILI, D., red. izd-va;
POGOSOV, V., tekhn. red.

[Functional analysis and its application; transactions]
Funktsional'nyi analiz i ego primenenie; trudy. Baku, Izd-
vo Akad. nauk Azerbeidzhanskoi SSR, 1961. 289 p.

1. Vsesoyuznaya konferentsiya po funktsional'nому analizu i
ego primeneniyu, 5th, Baku, 1959.
(Functional analysis--Congresses)

DOMSHLAK, Yu.I.; KHALILOV, Z.I.

Fifth All-Union Conference on Functional Analysis and its Applications.
Usp. mat. nauk 16 no.2:242-247 Mr-Ap '61. (MIRA 14:5)
(Functional analysis—Congresses)

KHALILOV, Z.I.

Stability of solutions of an evolutionary equation with an unbounded operator. Dokl. AN Azerb. SSR 17 no. 2:91-94 '61. (MIA 14:4)

1. Institut matematiki i mekhaniki AN Azerbaydzhanskoy SSR..
(Spaces)

KHALILOV, Z.I.

Stability of solutions of a differential equation in Banach space.
Dokl.An Azerb. SSR 17 no.5:367-370 '61. (MIRA 14:6)

1. Institut matematiki i mekhaniki AN Azerbaydzhanskoy SSR.
(Differential equations)

11631

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S/020/61/137/004/006/031
C111/C222AUTHOR: Khalilov, Z.I., Academician of the Academy of Sciences
Azerb.SSR

TITLE: Stability of solutions to an equation in the Banach space

PERIODICAL: Akademiya nauk SSSR. Doklady, vol.137, no.4 1961, 797-799

TEXT: On the V.All-Union Conference on Functional Analysis in Baku in October 1959 the author reported about the content of the present paper.

The author considers the set of functions $x(t)$ defined on $J = [0, +\infty)$ and assuming values of the Banach space B . Let L be the set of functions $x(t)$ locally integrable according to Bochner with a countable number of compatible norms $\|x\|_n = \int_0^t \|x(t)\| dt$, $n=1, 2, \dots$. Let $U(t, s)$, $0 \leq s \leq t < +\infty$,

be a linear bounded operator in B , where ${}^1 U(t, s)$ is strongly continuous in t and s ; $U(t, t) = I$, I -- unit operator; ${}^2 U(t, s)U(s, 0) = U(t, 0)$, $0 \leq s \leq t$.

The author considers the nonlinear equation

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Stability of solutions...

$$x(t) = U(t, 0)x_0 + \int_0^t U(t, s)h(x(s), s)ds, \quad x_0 \in B; \quad (1)$$

obviously it holds $x_0 = x(0)$.

Let M_1 be the set of functions $x(t)$ with the representation

$$x(t) = U(t, 0)x_0, \quad x_0 \in B, \quad (2)$$

and M_2 be the set of functions with the representation

$$x(t) = U(t, 0)x_0 + \int_0^t U(t, s)f(s)ds, \quad x_0 \in B, \quad (3)$$

where $f(t) \in \mathbb{B}$, \mathbb{B} -- a Banach space being stronger than L , where the norm is denoted by $|f|_{\mathbb{B}}$; e.g. \mathbb{C} -- set of continuous functions with the norm $\|x\| = \sup_t \|x(t)\|$.

Lemma 1: The set X of all bounded functions of M_1 is a subspace of the space \mathbb{C} .

Lemma 2: If B_0 is closed then there exists a positive number S so that

Card 2/4

Stability of solutions...
for all $x(t) \in X$ it holds

$$|x| \leq s \|x(0)\|.$$

Here $|x|$ denotes the norm in θ , and B_0 is the set of all elements of B being beginnings of bounded functions of M_1 , $|x| < +\infty$.
Lemma 3: Let B_0 be closed, and let it have a closed complement B_1 . To every $f(t) \in B$ there corresponds at least one bounded function of M_2 . Then there exists a constant $K > 0$ so that to every $f(t) \in B$ there corresponds an $x(t) \in M_2$ so that $|x| \leq K \|f\|_B$; this function can be chosen so that $x(0) \in B_1$; then it is determined uniquely.

Let the nonlinear operator $h(x(t), t)$ be so that for every $x(t) \in \theta$, $\|h(x(t), t)\| < a$ it holds $h(x(t), t) \in E$. Let exist a $\gamma > 0$ so that

$$\|h(x', t) - h(x'', t)\|_B \leq \gamma |x' - x''|$$

for all $x', x'' \in \theta$, $|x'| < a$, $|x''| < a$.

Theorem 1: Let $\beta = \|h(0, t)\|_B$. Under the assumptions of lemma 3 if $K\gamma < 1$ and $\beta < K^{-1}(1-K\gamma)a$, for every $\xi_0 \in B_0$, $\|\xi_0\| < b = s^{-1}((1-\gamma)a - K\beta)$ there exists a unique solution $x(t)$ of (1) so that $|x| < a$ and $P_0 x(0) = \xi_0$

Stability of solutions...
this solution satisfies

$$|x| \leq (1-K\gamma)^{-1} (K\rho + S\|\xi_0\|). \quad (4)$$

Here P_0 is the projection operator defined by $x_0 = P_0 x$, $x \in B$, $x_0 \in B_0$.
The author mentions M.G.Kreyn. There are 3 Soviet-bloc and 4 non-Soviet-bloc references. The references to the two English-language publications read as follows: T. Kato, Div. Electromag. Res. Inst. Math. Sci. N.Y. Univ., Res. Rep. no. BK-11 (1955). J.L.Massera, J.J.Schäffer, Ann. Math., 67, no. 3, 517 (1958).

ASSOCIATION: Institut matematiki i mekhaniki Akademii nank Azerb SSR
(Institute of Mathematics and mechanics of the Academy of Sciences Azerbaydzhanskaya SSR)

SUBMITTED: December 3, 1960

Card 4/4

ALIKHANOV, E.N.; ARUSHANOV, N.A.; AKHUNDOV, V.Yu.; ALIZADE, M.A.; AZIZBEKOV,
Sh.A.; BAGIROV, M.A.; VEZIRCV, S.A.; VOLOBUYEV, V.R.; VEKILOV, F.M.;
GADZHIYEV, N.M.; GUSEYNOV, D.M.; GUSEYNOV, I.A.; DADISHEV, K.K.;
DADASHZADE, M.A.; DALIN, M.A.; ISKENDEROV, M.A.; KAZIYEV, M.A.;
KARAYEV, A.I.; KASHKAY, M.S.; KEL'DYSH, M.V.; KERIMOV, A.G.;
LEMBERANSKIY, A.D.; MAMEDOV, G.K.; MEKHTIYEV, M.R.; MIRZOYEV, S.A.;
NAGIYEV, M.F.; NASRULLAYEV, N.I.; OGUDZHEV, A.K.; RAIZHABOV, R.A.;
RUDNEV, K.N.; SADYKHOV, R.N.; SEMENOV, N.N.; TOPCHIYEV, A.V.;
TOPCHIBASHEV, M.A.; TAIROVA, T.A.; KHALILOV, Z.I.; EFENDIYEV,
G.Kh.; SHUKYUROVA, Z.Z.

IUsif Geidarovich Mamedaliev. Azerb.khim.zhur. no.6:5-6 '61.
(Mamedaliev, IUsif Geidarovich, 1905-1961)

KHALILOV, Z.I., akademik

Linear problem of control in banach space. Dokl. AN SSSR 155 no. 4:
767-770 Ap '64. (MIRA 17:5)

1. AN AzerSSSR.

~~REF ID: A6511~~ DOKLAD ALBERT/ASD/LC EM
RECEIVED APR 16 1989

AUTHORS: Shataashvili, S. Kh.; Khalilov, Z. I. "Akademik" 1984

One-dimensional fundamental mixed problem of the theory
of steady state elastic vibrations

in: AN AzerbSSR. Doklady*, v. 20, no. 4, 1964, p. 111

This fundamental mixed problem, steady state elastic vibrations

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721720005-7

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KHALILOV, Z.I.

Linear problem of control in a Banach space. Dokl. AN Azerb. SSR
20 no.5:3-6 '64.
(MIRA 17:8)

1. Institut matematiki i mekhaniki AN AzSSR.

ACCESSION NR: AP4045055

S/0249/64/020/006/0009/0014

AUTHOR: Alikhanova, R. I., Khalilov, Z. I.

TITLE: The Cauchy problem for a quasi-parabolic equation

SOURCE: AN AzerbSSR. Boklady*, v. 20, no. 6, 1964, 9-14

TOPIC TAGS: Cauchy problem, parabolic equation, quasiparabolic equation

ABSTRACT: In continuation of earlier work (Agayev G. N., Alikhanova R. I. Trudy* Instituta matematiki i mekhaniki AN Azerb. SSR, vol. 10, 1963), the author considers the Cauchy problem for the functional integrodifferential equation

$$\frac{du(t, x)}{dt} = - \sum_{|m| < r} \varphi^m \left[\int_{R_n} u^2(t, \xi) d\xi \right] A_m(t) D^m u(t, x) \quad (1)$$

with the initial condition

$$u(t, x)|_{t=0} = u_0(x). \quad (2)$$

where R_n is an n-dimensional Euclidean space. It is assumed that

$$0 < \sum_{|m| < r} \varphi^m(z) A_m(t) p^m < C_0 [1 + |p|^2], \quad (3)$$

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where $C_0 > 0$ is a definite number, independent of t and z . The form

$$\sum_{m=1}^{r-1} \varphi^m(z) A_m(t) p^m \quad (4)$$

then decreases monotonously in z with fixed t and a real vector p . The solution is sought in the class of functions vanishing near infinity, together with their derivatives of the order $\geq 2r-1$, and reduces to the solution of a dual problem. It can readily be demonstrated that if

$$v(t, p) = \int e^{i(p \cdot z)} u(t, x) dx, \quad (5)$$

and $v(t, p)$ is the solution of the dual problem

$$\frac{dv(t, p)}{dt} = - \sum_{m=1}^{r-1} \varphi^m \left[\int v^m(t, p) dp \right] A_m(t) p^m v(t, p), \quad (6)$$

with the initial condition

$$v(t, p)|_{t=0} = v_0(p). \quad (7)$$

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ACCESSION NR: AP4045055

then $u(t, x)$ is the formal solution of the problem represented by (1) and (2). Assuming that

$$0 < v_0(p) < \frac{N}{[1 + |p|^2]^{r+\frac{N+1}{2}}}, \quad (8)$$

where $N > 0$ is a definite number, it is clear that the integrals

$$\int [1 + |p|^2]^{2r+\frac{N+1}{2}} v_0^m(p) dp \quad (9)$$

$$\int v_0^m(p) dp \quad (10)$$

converge. This is proven by means of four preliminary lemmas. The author then goes on to prove that the problem represented by (6) and (7) has a solution, arrived at by the methods of successive approximation and mathematical induction. In final form, the required solution of the problem represented by (1) and (2) is shown to be

$$u(t, x) = \left(\frac{1}{2\pi} \right)^n \int V(t, p) e^{-i(p \cdot x)} dp. \quad (11)$$

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KHALILOV, Z.I.

Development of science in Azerbaijan. Spisanie BAN 9 no. 1/2:
124-130 '64.

1. President, Academy of Sciences of Azerbaijan.

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POSTCARD

ACCESSION NR: AP4030777

8/0020/64/155/004/0767/0770

AUTHOR: Khalilov, Z. I. (Academician)

TITLE: Linear Control Problem in Banach Space

SOURCE: AN SSSR. Doklady*, v. 155, no. 4, 1964, 767-770

TOPIC TAGS: control system, linear control problem, function analysis, Banach Space, Cauchy problem

ABSTRACT: Let B be a Banach Space. The problem is to find a vector-function $f(t) \in L_p$, $p \geq 1$ (the controlling function) that minimizes (or maximizes) the functional

$$I_1(f) = \int (x(t), dG(t)),$$

where $x(t)$ is the solution (classical or continuous generalized) of the Cauchy problem

$$\frac{dx}{dt} = A(t)x + f(t), \quad 0 < t < 1, \quad x(0) = x_0, \quad (4)$$

where, for each $t \in [0, 1]$, $A(t)$ is a linear operator on B , with dense domain; x_0 is a given element of B ; $G(t)$ is a given vector-function of bounded strong variation, with values in B^* ; the derivative dx/dt is taken in the strong sense.

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Finally, f is to belong to the class K defined by the constraints

$$a) 0 \leq f(t) \leq F, \quad b) \int (f(t), b(t)) dt \leq c,$$

where F is a given element of B , c a non-negative constant, $b(t)$ a given vector-function with values in B^* , and $b(t) \in L_q$, where $\frac{1}{p} + \frac{1}{q} = 1$.

As in the finite-dimensional case, the problem is transformed into that of finding $f(t) \in L_p$, and in class K minimizing (or maximizing) a functional

$$I_1(f) = \int (f(t), a(t)) dt,$$

where $a(t) \in L_p$ (provided $A(t)$ satisfies certain conditions), and this problem is solved as in the classical case (Neyman-Pearson lemma): Suppose that for any non-negative k , and for each value of $t \in [0, 1]$ the functionals $a(t)$ and $k b(t)$ are comparable in the cone K , and that for sufficiently large $|k|$, $k < 0$, $a(t) - kb(t) \geq 0$ on K , for all $t \in [0, 1]$. For each k , let

$$E^-(k) = \{t : a(t) - kb(t) < 0\}, \quad E(k) = \{t : a(t) - kb(t) = 0\}, \quad E^+(k) = \{t : a(t) - kb(t) > 0\}.$$

Let $k_0 = \text{l.u.b. } k < 0, \int (F, b(t)) dt < c$.

and let

$$E_0^- = E^-(k_0), \quad E_0 = E(k_0), \quad E_0^+ = E^+(k_0)$$

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Then the set of minimizing functions is given by: $f(t) = F$ on E_0^- ; $f(t) = 0$ on E_0^+

$f(t)$ is arbitrary on E_0 , satisfying (a) and (b) if $k_0 = 0$, satisfying

$\int_{\Omega} f'(f(t), b(t)) dt = C$, if $k_0 \neq 0$.
This theorem is applied to the concrete problem of minimizing a functional of the

$$I(f) = \iint_{\Omega} u(f, t) dG(f, t) dt.$$

Ω is a bounded region in R^n , where u is the solution of a Cauchy problem:

$$\frac{\partial u}{\partial t} = Lu + f(f, t), \quad u|_{t=0} = \psi(t).$$

involving a strongly self-adjoint, positive definite elliptic operator. Here again, f is the function to be determined, subject to certain restrictions. Orig. art. has: 8 equations.

ASSOCIATION: None

SUBMITTED: 28Dec63

ENCL: 00

Card 3/4

ACCESSION NR: AP4030777

SUB CODE: MA

NO REF Sov: 007

OTHER: 003

Card 4/4

L 04263-67 EWT(d) IJP(c)
ACC NR: AP6030005

SOURCE CODE: UR/0020/6/169/005/1020/1023

AUTHOR: Khalilov, Z. I. (Academician AN AzerbSSR); Aslanov, E. Dzh.

27

ORG: Institute of Cybernetics, AN AzerbSSR (Institut kibernetiki AN AzerbSSR)

B

TITLE: On a variation problem in a Hilbert space and its application to equations
having partial derivatives

SOURCE: AN SSSR. Doklady, v. 169, no. 5, 1966, 1020-1023

TOPIC TAGS: variational calculus, Hilbert space, partial differential equation,
Cauchy problemABSTRACT: If H_1 and H_2 are Hilbert spaces with scalar products $(x,y)_1$ and $(\xi,\eta)_2$, K is a linear continuous operator, and $E(x)$ is a quadratic functional in H_1 defined by the formula

$$E(x) = (Kx - \xi, Kx - \xi)_2 + (x, x)_1. \quad (1)$$

then the following theorem holds: Theorem. For any $\xi \in H_2$ there exists an $x_0 \in H_1$ which minimizes functional (1) and which is defined uniquely by the equation

$$x + K^*Kx = K^*\xi.$$

Card 1/2

UDC: 517.221+517.216.2

L 04263-57

ACC NR: AP6030005

This theorem is proved, and its application to two variation problems is illustrated. The solution of these problems is shown to be applicable to problems involving partial derivatives. The Cauchy heat-conductivity problem is studied as an example. Orig. art. has: 25 formulas.

SUB CODE: 12/ SUBM DATE: 05Apr66/ ORIG REF: 005/ OTH REF: 005

Card 2/2 fv

SATTAR-ZADE, A.Dzh.; KHALILOVA, E.F.; SATTAR-ZADE, I.S.

Transformation of turpentine over activated Khanlar clay. Uch.
zap. AGU. Ser. fiz.-mat. i khim. nauk no.4:85-87 '61. (MIRA 16:6)
(Turpentine) (Clay)

KHALILOVA, E.F.; SATTARZADE, A.D.; SATTARZADE, I.S.

Conversion of turpentine by thermal catalysis over the nonactivated
Aksanskaya clay. Izv. vys. ucheb. zav.; neft' i gaz 3 no.10:125-
128 '60. (MIRA 14:4)

1. Azerbayzhanskiy gosudarstvennyy universitet imeni S.M., Kirova.
(Turpentine) (Catalysis)

SADYKHADE, S.I.; SULTANOV, R.; KHALILJOVA, E.M.

Addition of silicon hydrides to β -propargylhydroxy propionitrile. Azerb. khim. zhur. no.1:57-62 '64.

(MIRA 17:5)

SULTANOV, R.H.; MAMMADALIYEV, S.I.; KHALILOVA, E.M.

synthesis of epoxyaminonitiles. Nauk. org. knim. 1 no. 7:1336
1966.
(MIRA 13:11)

1. Institut neftekhimicheskikh protsessov imeni Yu.G.Mamadalievaya
AN Azerbaydzhanskiy SSR, Baku.

I 05159-67 EWP(j)/EWT(m) RM
 ACC NR: AP6028576

SOURCE CODE: UR/0316/66/000/003/0131/0154

AUTHOR: Khalilova, E. M.; Sadykhzade, S. I.;
 ORG: INKhP AN AzerbSSR

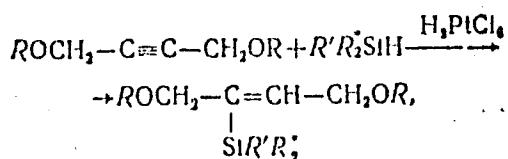
20
13

TITLE: Synthesis of silicon-containing 1,4-dialkoxy-2-butenes

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 3, 1966, 131-134

TOPIC TAGS: organosilicon compound, butene, organic synthetic process

ABSTRACT: The paper deals with the synthesis of unsaturated organosilicon monomers containing alkoxy groups in the alkyl radical. The monomers were obtained by catalytic addition of silicon hydrides to 1,4-dialkoxy-2-butene according to the reaction



where $\text{R}=\text{CH}_3; \text{C}_2\text{H}_5; \text{C}_3\text{H}_7;$
 $\text{R}'=\text{CH}_3; \text{C}_2\text{H}_5; \text{Cl}$
 $\text{R}''=\text{Cl}; \text{C}_2\text{H}_5; \text{C}_3\text{H}_7;$
 $\text{R}'=\text{R}''=\text{Cl}; \text{C}_2\text{H}_5.$

Card 1/2

ACC NR: AP6028576

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721720005-7"

The yields of the reaction products (twelve were synthesized) ranged from 47 to 51% based on the reactants. The experimental procedure is illustrated with the preparation of 2-methyldichlorosilyl-1,4-diethoxy-2-butene. Orig. art. has: 1 table.

SUB CODE: 07/ SUBM DATE: 25Jan65/ ORIG REF: 004

Card 2/2 MLE

SADYKH-ZADE, S.I.; SHIKHIYEV, I.A.; XHALILOVA, E.M.

Addition of silane hydrides to acetylenic alcohols and their derivatives. Zhur. ob.khim. 34 no. 5:1393-1395 My '64.
(MIRA 17:7)

1. Institut neftekhimicheskikh protsessov Akademyi Nauk Azerbaydzhanskoy SSR.

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721720005-7

KHALILOVA, E.M.; SULTANOV, R.; SADYKHZADE, S.I.

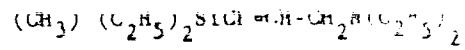
Synthesis of silicon-containing unsaturated acetates,
Azerb. khim. zhur. no.1:97-103 '64. (MIRA 17:5)

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721720005-7"

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721720005-7



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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721720005-7

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"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721720005-7

...the addition of silane hydrides to propenyl alcohol, butynediol and

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721720005-7"

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721720005-7

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APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721720005-7"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721720005-7

ABSTRACT: Silicon-containing acetates and alkoxides are prepared by the reaction of

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721720005-7"

RASULOVA, S.M.; KHALILOVA, N.G.; DZHAFARLI, R.M.; MURADOVA, S.A.; ZULFIQAROV,
Z.G.

Investigation of means of increasing stable activity of the
cracking catalyst "khanlarit" [in Azerbaijani with summary in
Russian]. Izv. AN Azerb. SSR. Ser. fiz.-tekhn. i khim. nauk
no.5:81-95 '58. (MIRA 12:1)
(Cracking process) (Catalysts)

KHALITIOVA, R.R.; AKHMETDOW, Sh.T.; GALZHIEV, G.Yu.

Alkylation of acenaphthene by olefins. Uch. zap. AGU. Ser. khim.
nauk no.4:73-81 '63.
(MIRA 17:11)

ACC NR: AP7008662

(A)

SOURCE CODE: UR/0249/66/022/009/0039/0042

AUTHOR: Guseynov, D. A.; Akhmedov, Sh. T.; Magerramov, M. N.; Khalilova, R. A.; Yusifov, Ch. A.

ORG: Institute for Chemistry of Additives (Instut khimii prisadok)

TITLE: Allylation of naphthalene, α -methylnaphthalene, tetralin, acenaphthone, biphenyl and fluorene by allyl alcohol in the presence of acid catalysts

SOURCE: AN AzerbSSR. Doklady, v. 22, no. 9, 1966, 39-42

TOPIC TAGS: allyl alcohol, naphthalene, diphenyl compound, fluorene, acenaphthene

ABSTRACT: Allyl derivatives of polynuclear and condensed aromatic hydrocarbons were synthesized by allylation of the latter with allyl alcohol in the presence of the acid catalysts $ZnCl_2$, $FeCl_3$, and $SnCl_4 \cdot 6H_2O$. $ZnCl_2$ was found to be the most effective catalyst. The following compounds were obtained (yields are given in parentheses): allylnaphthalene (68.3%), allyl- α -methylnaphthalene (88.1%), allyltetralin (55.8%), allylbiphenyl (44.5%), allylacenaphthene (34.8%), and allylfluorene (50.0%). The effect of different reaction parameters such as temperature, ratio of the reacting components, amount of catalyst, duration of experiment, etc. on the yield of the products was studied. Monoallyl derivatives were found to form almost exclusively. If $FeCl_3$ or $SnCl_4 \cdot 6H_2O$ are used, the allylation reaction is slow and the yield of allyl derivatives does not exceed 15-20%. The paper was presented by Academician

Card 1/2

ACC NR: AP7008662

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721720005-7"

AN AzerbSSR Kuliyev, A. I. Orig. art. has: 2 tables.

SUB CODE: 07/ SUBM DATE: 14Feb66/ ORIG REF: 007/ OTH REF: 006

Card 2/2

XHALILOVA, S.G.

Mites of the genus Tetranychus, injurious to the trees and shrubs
along the Samur-Divichi Canal and in Apsheron. Uch.zap. AGU no.2:
69-76 '55.

(MLRA 9:12)

(Caspian Sea region--Red spider)
(Trees--Diseases and pests)

XHALILOVA, S.G.

Mites of the genus Tetranychus, injurious to forest shelterbelt
trees and shrubs of the Samur-Divichi Canal regions. Uch. zap.
AGU no.7:83-90 '55. (MLRA 9:12)

(Samur-Divichi Canal region--Red spider)
(Trees--Diseases and pests)
(Shrubs--Diseases and pests)

COUNTRY :	USSR	P-5
CATEGORY :		
ASS. JOUR. :	RZBiol., No. 19, 1958, No. 87716	
AUTHOR :	<u>Khalilova, S. G.</u>	
INST.	Azerbaijani University	
TITLE :	Tetranychoid and Gall-Making Mites Injurious to Planted Forests in the Koltashenskiy and Vartashenskiy Rayons of Azerbaijan SSR	
ORIG. PUB. :	Uch. zap. Azerb. un-t, 1957, No 4, 69-99	
ABSTRACT :	Biological characterization of 17 species of phytophagous mites reported in two Rayons of Azerbaijan on forest trees. Feed plants of individual species and their economic significance.	
CARD:		

KHALILOVA, S.G.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721720005-7"

Tetranychid mites, harmful to trees and shrubs in forests of

Ismailly District of the Azerbaijan S.S.R. Uch. zap. AGU no.1:

85-93 '58.

(MIRA 12:1)

(Ismailly District--Trees--Diseases and pests) (Red spider)

KHALILOVA, S. G.

"An Approach to the Study of Tetranychus Mites of the Oak and Horn-beam Forests of the Lenkoran Zone, Azerbaydzhhan SSR."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Azerbaydzhhan State University (Baku)

KHALILOVA, S.G.

Tetranychid mites in the oak-hornbeam forests of the Lenkoran zone.
Uch. zap. AGU Biol. ser. no.1:31-36 '60. (MIRA 14:5)
(LEKORAN LOWLAND—RED SPIDER)
(OAK—DISEASES AND PESTS) (HORNBEAM—DISEASES AND PESTS)

KHALILOVA, S.G.; RADZHABOVA, D.A.

The mite Bryobia redikorzevi Reck as a fruit tree pest in Azerbaijan.
Uch. zap. AGU. Biol. ser. no. 4:49-56 '60. (MIRA 14:5)
(Azerbaijan—Red spider) (Fruit trees—Diseases and pests)

KHALILOVA, T. A.

"Mineralogical Composition and Ore Types of the Ferro-Manganese Deposits in Khanlarskiy Rayon" (Deposits of Useful Minerals, Ferrous Ores) izv. AN Azerb.
SSR, No. 12, 1953, pp 79-87

Abs

W-31146, 1 Feb 55

KHARLOVA, T. A.

"Distribution of Manganese in the Magmatic rocks of Azerbaijan"
Dokl. Ak. Az. SSR, 10, No 5, 327-332, 1954 (Azerbaijani resume)

The author surveys the 250 analyses, as found in the literature, of the rocks of Azerbaijan. According to age the rocks belong to various periods, from the lower Jurassic up to the Quaternary. The content of Mn in the magmatic rocks (ultrabasic, basic, medium, acidic) is presented in a table (from 0.25% to 0.106% as MnO, and from 0.202 to 0.034% as Mn; SiO₂, 31-66%). He clarified the law governing the variation of the content of Mn as a function of the quantity of SiO₂ and the ration Mn: Fe. (RZhGeol, No 6, 1954)

SO: Sum. 4v2, 12 May 55

Inst. Geology im I. M. Gubkin AS Azer SSR

15-57-12-17339

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 12,
p 96 (USSR)

AUTHORS: Andrushchenko, P. F., Khalilova, T. A.

TITLE: Mineral Composition of Ores From the El'vorskoye
Ferromanganese Deposit (Mineral'nyy sostav rud El'vor-
skogo zhelezo-margantsevogo mestorozhdeniya).

PERIODICAL: Izv. AN AzerbSSR, 1957, Nr 3, pp 63-85

ABSTRACT: In view of their mineral composition, manner of
occurrence and structural peculiarities, El'vorskoye
manganese ores can be classified as oxides. A very
small number of minerals enter into their composition.
Pyrolusite is widely distributed, and occurs in the
form of continuous, finely-crystalline masses and also
as aggregates of fairly large crystalline grains.
Ramsdellite (originally analyzed in the Soviet Union)
is found as coarsely-crystalline radial aggregates
forming layers in the massive, reddish brown iron-

Card 1/2

KASHKAY, M.A.; KHALILOVA, T.A.

Genesis of manganese ores in Khanlar District. Izv. AN SSR no.8:
49-65 Ag '57. (MLRA 10:9)
(Khanlar District--Manganese ores)

KHALILOVA, T.A.

Plattnerite in lead-zinc ores of the Mekhmana deposit. Dokl. Akad. Nauk Azerb. SSR 16 no. 4: 363-366 '60.
(MIRA 13:7)
(Mekhmana region--Plattnerite)

KHALILOVA, T.A.

Textural and structural characteristics of the ores in the
Mekhmana lead-zinc deposit. Izv.AN Azerb.SSR. Ser.geol.-
geog.nauk no.2:33-43 '64.

(MIRA 18:11)

KHALILOVA - V. KH.

AUTHOR: Zhdanov, A. K., Khadeyev, V. A.,
~~Khalilova, V. Kh.~~ 75-6-5/23

TITLE: The Ammetric Titration of Bismuth With Potassium Iodide in the
Presence of Pyramidon(Amperometricheskoye titrovaniye vismuta
yodidom kaliya v prisutstvii piramidona).

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1957, Vol. 12, Nr 6,
pp. 695-698 (USSR)

ABSTRACT: The possibility of an ammetric titration of bismuth in strong
acid solutions in the presence of surplus pyramidon with
potassium iodide is shown. With this reaction a compound of
bismuthite tetraiodide is formed. The titration was carried
out by means of an ordinary polarograph with a dropping
mercury electrode. The presence of zinc-, manganese-, nickel-,
cobalt-, iron-, aluminum- and magnesium-ions in the bismuth-
solution to be titrated does not disturb the determination
of bismuth, even if their concentration exceeds 50 to 100
times the value of the bismuth concentration. Only lead-ions
act disturbingly on the titration. Even 60 times higher
concentrations of sulphates, nitrates, chlorides, phosphates
and acetates have no disturbing effect on the titration.

Card 1/2

The Ammetric Titration of Bismuth With Potassium Iodide in the 76-6-5/23
Presence of Pyramidon

The method of titration of bismuth was also tried out with
synthetic mixtures of cadmium and bismuth.
There are 4 tables, and 3 references, 3 of which are Slavic.

ASSOCIATION: Central Asian University imeni V. I. Lenin, Tashkent
(Sredneaziatskiy universitet im. V. I. Lenina, Tashkent).

SUBMITTED: October 18, 1956

AVAILABLE: Library of Congress

1. Bismuth-Ammetric titration
2. Potassium iodide-Applications
3. Pyramidon-Applications

Card 2/2

KHALILULIN, K. A.

KHALILULIN, K.A. "Investigation of some Problems of the Interference Method of Measuring Distance." Min Higher Education USSR. Leningrad Inst of Precision Mechanics and Optics. Leningrad, 1956. (Dissertation for the Degree of Candidate in Technical Science)

So: Knizhnaya Letopis', No. 18, 1956,

25(1), 28(2)

AUTHOR: Khalilulin, K.A., Candidate of Technical Sciences SOV/146-58-4-20/22

TITLE: A General Investigation of Prism System Errors of an Apochromatic Compensator for an Interferometer

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Priborostroyeniye, 1958, Nr 4, pp 134-143 (USSR)

ABSTRACT: The theory of apochromatic compensators was developed by Professor V.N. Churilovskiy on the basis of a new principle of apochromatic correction of prism systems (Ref 1 and 2). First the author presents formulae for practical calculation of an apochromatic compensator. For simplifying the design and for reducing the volume of calculation work the author suggests a prism system as shown in Figure 1. The compensator consists of 4 wedge-shaped prisms manufactured of the same type of glass. The author then investigates the possible errors of apochromatic compensators. The formulae presented in the paper permit a complete investigation of the influence of manufacturing errors of apochromatic compensator systems. They provide important con-

Card 1/3

SOV/146-58-4-20/22

A General Investigation of Prism System Errors of an Apochromatic Compensator for an Interferometer

clusions for the assembly and adjustment of compensators. With these formulae the influence of refracting angle errors of the compensator prism on the magnitude of the light path difference in an interferometer may be investigated. As a result of theoretic and experimental investigation, tolerances were established for turning individual components of the prism system and for turning the moveable system in regard to the stationary one in the limits of $\pm 30''$. Problems of a partial error compensation by adjustments of the manufacturing plant, the assembly and adjusting technology and also some assumptions for the calculation of special types of compensators which are less susceptible to missalignment will be considered in future investigations. There are 2 graphs and 3 diagrams and 4 Soviet references.

Card 2/3

CHURILOVSKIY, V.N., prof. ; KHALILULIN, K.A.

Theory and study of apochromatic compensators used in interferometers.
Opt.-mekh. prom. 25 no. 2:5-8 F '58.
(Interferometer) (MIRA 11:7)

83161

9.5300

S/115/60/000/008/011/013
B019/B063

AUTHOR: Khalilulin, K. A.

TITLE: An Achromatic Compensator for the Difference Between the Optical Path Lengths

PERIODICAL: Izmeritel'naya tekhnika, 1960, No. 8, pp. 44 - 47

TEXT: In the introduction to the present paper, the author defines achromatic compensators as compensators placed in interference instruments where they maintain the position of an achromatic band in the system of interference bands during measurement without changing the spectral composition. The idea of such a compensator was conceived by Professor N. P. Zavadskiy (1906). This compensator is further mentioned in a publication by Academician V. P. Linnik (Ref. 1) dealing with the development of an interferometer for the control of large machine parts. T. S. Kolomytsova's theory (Ref. 2) is only an approach. The present paper describes the elements of an exact theory of the achromatic compensator, and gives some experimental data. The work was carried out under the supervision of Professor V. N. Churilovskiy. The theory of the

Card 1/2

KHALILULIN, K.A.

Measuring indices of refraction of glass and liquids. Izv.vys.ucheb.
zvezd prib. 3 no.2:94-101 '60. (MIRA 14:4)

1. Vojennaya Krasnoznamennaya akademiya svyazi. Rekomendovana
kafedroy teorii opticheskikh priborov Leningradskogo instituta
technoy mekhaniki i optiki.
(Refraction)

KHALIULLIN, S. Kh.

KHALIULLIN, S.Kh.

A drive for new graduate students. Vest. AN Kazakh. SSR 14 no.4;
99 Ap '58. (MIRA 11:6)
(Academy of Sciences of the Kazakhstan S.S.R.)

SHEMTAKIN, N.M.; OVCHINNIKOV, Yu.A.; IVANOV, V.T.; KIRYUSHKIN, A.A.;
KHALILULINA, E.Kh.

Depsipeptides. Part 42: Structure and complete synthesis of
sporidesmolides I and II. Zhur. ob. khim. 35 no.8:1399-1412
Ag '65.

(MIRA 1818)

OVCHINNIKOV, Yu.A.; IVANOV, V.T.; KIRYUSHKIN, A.A.; KHALILULINA, K.Kh.

Synthesis of sporidesmolic acid B. Izv.AN SSSR.Otd.khim.nauk
no.3:578-579 Mr '63. (MIRA 16:4)

1. Institut khimii prirodnykh soyedineniy AN SSSR.
(Sporidesmolic acid)

GREBNEV, V.N.; KUZNETSOVA, Z.I.; KHALILULLINA, Z.F.; MEYER, L.K.

Movement for public health and personal hygiene in Kulebaki in
Gorkiy Province. Zdrav. Ros. Feder. 5 no. 3:14-16 Mr '60.

(MIRÁ 14:2)

1. Is Kulebaskogo gozdravotdela (zav. V.N. Grebnev) i otdela
organizatsii zdravookhraneniya Moskovskogo instituta gigiyeny
imeni F.F. Erismana (dir. A.P. Shitskova).
(KULEBAKI--HEALTH EDUCATION)

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721720005-7

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721720005-7"

KUZNETSOV, N.I.; KHALIMOVICH, M.P.

Effect of inaccuracies in the manufacture of a symmetrical gyroscope
on its motion. Inzh.-fiz. zhur. no.8:112-115 Ag '59. (MIRA 12:11)

1. Belorusskiy gosudarstvennyy universitet im. V.I. Lenina, Minsk.
(Gyroscope)

KHALIMOVICH, Mikhail Fanteleymonovich; VEREVKINA, N.M., rei.

[Collection of problems on theoretical mechanics]
Sbornik zadach po teoreticheskoi mekhanike. Minsk, Izd-
vo vyshego, srednego spetsial'nogo i professional'nogo
obrazovaniia BSSR, 1963. 116 p. (MIRA 18:8)

KHALIMOV, ¹⁸⁺⁶

Relative effectiveness of drilling methods in the Kuchnosukhokumsk area. Izv. AN Azerb. SSR, Ser. geol.-geop. nauk no. 5:113-116 '64.
(MIRA 18:6)

GULIZADE, M.P.; SHAKHBAZBEKOV, K.B.; IORDANOV, D.S.; KHALIMBEKOV, B.M.

Experimental determination of the coefficient of resistance for the movement of pipes in a slant hole. Izv. vys. ucheb. zav.; neft' i gaz. 8 no. 5:29-32 '65. (MIRA 18:7)

1. Azerbaydzhanskiy institut nefti i khimii im. M.Azizbekova.

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721720005-7

KHALIMBEKOV, M.M.

DECEASED
c1961

1962/4

SEE ILC

VETERINARY MEDICINE

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721720005-7"

1. KHALIMOV, A. I.
2. USSR (600)
4. Medicine-Study and Teaching
7. Activities of student groups at the Kharkov school for feldshers and midwives.
Fel'd. i akush. No. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

KHALIMONENKO, M.

Improve the system of establishing work norms and wages on
collective farms. Mekh. sil'. hosp. 11 no.7:31 J1 '60.(MIRA 13:10)
(Collective farms--Production standards) (Agricultural wages)

KHALIMONENKO, M.

"Organizing the use of agricultural machinery and tractors on
collective farms" by L.S. Prystapchuk, M.P. Khotenko. Reviewed by:
M.Khalimonenko; Mekh,sil,hosp. 11 no.12:28 D '60. (MIRA 13:12)
(Agricultural machinery) (Tractors)
(Prystapchuk, L.S.) (Khotenko, M.P.)

KHALIMONENKO, N.I., inzh.

Loading and unloading machines for mineral fertilizer storage.
Mashinostroenie no.3:67-69 My-Je '64.

(MIRA 17:11)

L 23593-66

ACC NR: AP6002603

(A)

SOURCE CODE: UR/0286/65/000/023/0098/0099

AUTHOR: Khalimonov, P. P.

17

B

ORG: none

TITLE: Temporary water-obstructing device. Class 84, No. 176832

SOURCE: Byulleten' izobreteni i tovarnykh znakov, no. 23, 1965, 98-99

TOPIC TAGS: dam, ~~water control~~ hydraulic engineering

ABSTRACT: This Author Certificate presents a temporary water-obstructing device of water-permeable strips, in particular, of canvas. To eliminate metallic or other rigid support rods absorbing the pressure head of the retained water, the canvas portion of the dike is in the form of a folded border connected with the base by straps which hold it from tipping toward the tailwater side (see Fig. 1). A water discharge chamber provided with a valve controlled externally is used.

Card 1/2

UDC: 627.43.004.6

L 23593-66

ACC NR: AP6002603

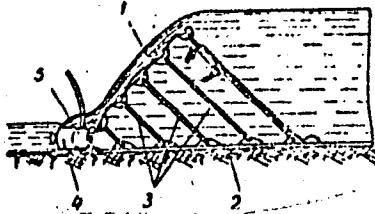


Fig. 1. 1 - canvas portion;
2 - base; 3 - straps; 4 - water
discharge chamber; 5 - valve.

Orig. art. has: 1 diagram.

SUB CODE: 13/

SUBM DATE: 13Nov36

Card 2/2 BK

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S/185/62/007/010/008/020

D234/D308

246111

AUTHORS: Lysytsya, M. P., Stryzhevskyy, V. L. and Khalimonova,
I. M.

TITLE: Temperature dependence of the intensities of vibrational absorption bands of molecular liquids

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 10, 1962,
 1090-1099

TEXT: Measurements were made in the whole temperature range where liquid phase exists, for fundamental vibrational bands and their combinations. The liquids were CCl_4 , hexaethylsiloxane, octamethyltrisiloxane, toluene, chlorobenzene, nitrobenzene, aniline and bromobenzene. The intensity of any absorption band varies according to

$$S_T = S_0 + \alpha(T - T_0), \quad (1)$$

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APPROVED FOR RELEASE: 09/17/2001

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Temperature dependence of ...

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the temperature coefficient being negative. For the first overtones of the vibrations, the integral absorption does not depend on temperature. Theoretical calculation (using the Frank-Condon principle) gives

$$\alpha \approx \frac{k}{2} \sum_{qj} \frac{1}{\omega} \frac{\partial^2 S(0)}{\partial q^2} \quad (16)$$

and the sign of α is estimated to be negative. There are 4 figures.

ASSOCIATION: Kyyivs'kyy derzhuniversytet; Instytut napivprovodny-kiv AN URSR (Kiev State University; Institute of Semiconductors, AS UkrSSR)

SUBMITTED: February 24, 1962

Card 2/2

LISITSA, M.P.; KHALIMONOVА, I.N.

Dispersion of crystalline tolane in the infrared spectral region.
Opt. i spektr. 14 no.6:793-797 Je '63. (MIRA 16:8)

(Tolane crystals—Spectra)

LISITSA, M.P.; KHALIMONOVA, I.N.

Absorption band frequencies and intensities of monosubstituted benzenes in the region of the valence oscillations of C - Harom bonds. Opt. i spektr. 11 no.2:185-191 Ag '61.

(MIRA 14:8)

{Benzene)
(Aromatization)

LISITSA, M.P.; KHALIMONOVA, I.N.

Temperature effect on the adsorption of benzene monosubstitutes
in the region of valence oscillations of C - H bonds. Opt. i
spektr. 11 no.3:332-341 S '61. (MIRA 14:9)
(Benzene Spectra)

LISITSA, M.P.; STRIZHEVSKIY, V.L.; KHALIMONOV, I.N.

Anomalous intensity distribution in vibration bands with Fermi resonance. Dokl.AN SSSR 145 no.6:1262-1264 Ag '62.
(MIRA 15:8)

1. Kiyevskiy gosudarstvenny universitet im. T.G.Shevchenko.
Predstavлено академиком I.V.Obreimovym.
(Molecular spectra)

KHALIMONOVА, I.N. [Khalimonova, I.M.]

Effect of temperature on the intensity of valence vibrations
of the C-H bonds of certain simple alcohols in the liquid
and solid states. Ukr.fiz.zhur. 7 no.5:483-491 My '62.

(MIRA 16:1)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.
(Chemical bonds) (Alcohols)

LISITSA, M.P. [Lysytsia, M.P.]; STRIZHEVSKIY, V.L. [Stryzhevs'kyi, V.L.];
KHALIMONOVA, I.N. [Khalimonova, I.M.]

Temperature dependence of the intensities of vibration absorption
bands of molecular liquids. Ukr. fiz. zhur. 7 no.10:1090-1100
O '62.

(MIRA 16:1)

l. Kiyevskiy gosudarstvennyy universitet i Institut poluprovodnikov
AN UkrSSR.

(Molecular spectra)

S/051/63/014/003/015/019
E039/E120

AUTHOR: Khalimonova, I.N.

TITLE: On the role of the vibration symmetry in the temperature dependence of the absorption bands intensity

PERIODICAL: Optika i spektroskopiya, v.14, no.3, 1963, 433-435

TEXT: The valence and plane vibration deformations of the C - H bond are examined in anthracene, tolane and stilbene. These materials contain atoms belonging to D_{2h} group and form monoclinic crystals with spatial grouping, P_{2h}^5 . For all three molecules there are only two different orientations of particles. An investigation of the spectra of stilbene and tolane on different samples shows that the intensity and even band structure depend on the sample and hence on the predominating orientation in the sample used. The value of the absorption coefficient at maximum κ_{max} , the total absorption S and half width of the band Γ are measured at 20 °C, and the temperature dependence of the bands is given as the ratio of the intensity at a given temperature to its

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• On the role of the vibration ...

S/051/65/014/003/015/019
E039/E120

maximum value. In all cases the dependence is linear over the range -160 to +20 °C. Analysis shows this temperature dependence is largely determined by vibrational symmetry. In the investigated temperature range for vibrational symmetry B_{3u} (for valence and ionic deformation) the total absorption changes by 22 ± 2%. For plane deformation vibrations of type B_{2u} and the same temperature range this change is not less than 35%. The plane deformation vibrations with B_{2u} symmetry for anthracene show the opposite temperature dependence in comparison with other materials. This is because of "Davydov splitting" (A.S. Davydov. Teoriya pogloschcheniya sveta v molekulyarnykh kristallakh, (Theory of Light Absorption in Molecular Crystals.), Izd. AN UkrSSR, Kiyev, 1951) producing two mutually perpendicular polarized components corresponding to vibrational symmetries A_u and B_u . It is concluded that under similar conditions the value and even the sign of the temperature dependence of the total absorption is primarily connected not with the form of the vibration but its symmetry.

There are 1 figure and 1 table.

SUBMITTED: August 20, 1962

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KHALIMONOVА, I. N.

Frequencies and intensities of plane deformation vibrations
of the C-H bonds of monosubstituted benzenes. Opt. i spektr.
13 no.6:791-794 D '62. (MIRA 16:1)

(Benzene--Spectra)

KHALIMONOVА, I.N.

Role of vibration symmetry in the temperature dependence of the absorption
band intensity. Opt. i spektr. 14 № 1'63.
(MIRA 16'4)
(Molecular spectra)

L 11166-63 EWP(j)/EPF(c)/EWI(m)/RDS--Pc-1/Pr-4--RM/WW
ACCESSION NR: AP3002786 S/0051/63/014/006/0793/0797

AUTHOR: Lisitsa, M. P.; Khalimonova, I. N.

61

TITLE: Dispersion of crystalline diphenyl acetylene in the infrared region

SOURCE: Optika i spektroskopiya, v. 14, no. 6, 1962, 793-797

TOPIC TAGS: oscillator strengths, dispersion, absorption, diphenyl acetylene

ABSTRACT: The purpose of the work was to measure the dispersion and absorption of crystalline diphenyl acetylene in the 0.75 to 17 my wavelength region, calculate the oscillator strengths on the basis of the dispersion and absorption data and compare the resultant values. The dispersion curves were obtained by the reflection procedure. The values of the index of refraction were calculated by means of a formula involving the reflection at the crystal-air interface and the absorption coefficient, which allows of determining the index with an error of 15%. The frequency dependences of the index of refraction and absorption coefficient are consistent with classical electronic theory. The oscillator strengths were calculated on the basis of the absorption by means of the usual formula and on the basis of the dispersion by means of two formulas based on the Kramers relations. The oscillator strengths computed on the basis of the absorption and dispersion

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ACCESSION NR: AP3002786

data agree well for the most intense longer wavelength bands at 690 and 759 cm⁻¹, but show significant divergence for the weaker shortest wavelength band (1077 cm⁻¹). The divergence is partly explained by the distortion of the dispersion curve in the region of relatively weak bands; additional factors are the use of the free electron mass and charge in the computation formulas (instead of an effective mass and effective charge) and the possible influence of exciton effects. Orig. art. has: 8 formulas, 5 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 06Oct62

DATE ACQD: 15Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 004

OTHER: 003

cs/lsw
Card 2/2